

## Appendix 7.5 Ethanol Facility Emissions Projections for 2018

**Table A7.5.1. Kansas Fuel Ethanol Facilities with Construction Permits Issued as of August 2007, with 2005 and 2006 Emissions for Facilities with Emissions Inventories on File**

Kansas Fuel Ethanol Facilities	City	Cap. (MGY*)	Year Cnst. Pmt.	NO <sub>x</sub> tons		SO <sub>2</sub> tons		PM <sub>2.5</sub> tons	
				2005	2006	2005	2006	2005	2006
East Kansas Agri-Energy	Garnett	51	2002		18.6		11.2		0.9
Wagon Wheel Energy	Atchison	118	2002						
Everton Energy	Concordia	121	2007						
Reeve Agri-Energy	Garden City	12	1997						
Conestoga Energy - Garden City	Garden City	55	2006						
Gardenview Bioenergy	Holcomb	110	2007						
Boothill Biofuels	Dodge City	121	2007						
Dial Ford County Bio Renew. Fuels	Dodge City	124	2007						
Western Plains Energy	Campus	45	2002		20.9		5.0		1.5
NABR Grant County	Ulysses	110	2005						
Agri Energy	Ulysses	60	2006						
Nexsun Ethanol	Ulysses	44	2007						
Panda Haskell Ethanol	Satanta	100	2005						
Prairie Horizon Agri-Energy	Phillipsburg	40	2004						
Ethanex Energy	St. Marys	140	2007						
Gateway Ethanol	Pratt	60	2003						
Nesika Energy	Scandia	21	2001						
Kansas Ethanol	Lyons	55	2006						
US Energy Partners	Russell	45	2002	40.1	20.5	0.2	2.4	13.5 <sup>2</sup>	3.4 <sup>2</sup>
Abengoa Bioenergy	Colwich	125	1996	24.8	26.4	2.2	2.1	5.4	2.5 <sup>2</sup>
Conestoga Energy - Liberal	Liberal	110	2006						
Emerald Renewable Energy	Topeka	100	2006						
E Caruso	Goodland	20	2006						
Agri Systems	Washington	20	2007						
ESE Alcohol	Leoti	2	1997						
				<b>Totals</b>	<b>64.9</b>	<b>86.4</b>	<b>2.4</b>	<b>20.7</b>	<b>18.9</b>
									<b>8.3</b>

<sup>1</sup> Million gallons per year

<sup>2</sup> Estimated value

Nearly all fuel ethanol facilities in Kansas are permitted as synthetic minor sources, and as such are not required to submit Class I emission inventories with specific values for air emissions of pollutants.

**Table A7.5.2. Calculation of Tons of Haze-Causing Pollutant per Million Gallons Ethanol Produced at Class I Fuel Ethanol Facilities in Kansas**

Cap. (MGY)	NO <sub>x</sub> tons	Cap. (MGY)	SO <sub>2</sub> tons	Cap. (MGY)	PM <sub>2.5</sub> tons
45	18.6	45	11.2	45	0.9
51	20.9	51	5.0	51	1.5
45	40.1	45	0.2	45	13.5
45	20.5	45	2.4	45	3.4
25	24.8	25	2.2	25	5.4
<u>25</u>	<u>26.4</u>	<u>25</u>	<u>2.1</u>	<u>25</u>	<u>2.5</u>
<b>236</b>	<b>151.3</b>	<b>236</b>	<b>18.6</b>	<b>236</b>	<b>27.2</b>
<hr/>					
Tons NO <sub>x</sub> per MGY → <b>0.641</b>					
Tons SO <sub>2</sub> per MGY → <b>0.098</b>					
Tons PM <sub>2.5</sub> per MGY → <b>0.115</b>					

**Table A7.6.3. Calculation of Estimated Total 2018 Fuel Ethanol Production and Emissions of Haze-Related Pollutants in Kansas**

Year	Capacity (MGY)	Σ cap. (MGY)	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>2.5</sub>
			<i>Average total tons per year</i>		
1995	25	25			
1996	25	50			
1997	14	64			
1998					
1999					
2000					
2001	21	85			
<b>2002</b>	<b>259</b>	<b>344</b>	<b>220.5</b>	<b>33.7</b>	<b>39.6</b>
2003	60	404			
2004	40	444			
2005	210	654			
2006	400	1,054			
2007	780	1,834			
2008	<b>780</b>	2,614	<i>&lt;--Begin estimated values</i>		
2009	<b>50</b>	2,664			
2010	<b>50</b>	2,714			
2011	<b>50</b>	2,764			
2012	<b>50</b>	2,814			
2013	<b>50</b>	2,864			
2014	<b>50</b>	2,914			
2015	<b>50</b>	2,964			
2016	<b>50</b>	3,014			
2017	<b>50</b>	3,064			
<b>2018</b>	<b>50</b>	<b>3,114</b>	<b>1,996.1</b>	<b>305.2</b>	<b>358.1</b>